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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/725,714	12/02/2003	Frank Hundscheidt	P16614-US1	4732
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ERICSSON INC. 6300 LEGACY DRIVE M/S EVR 1-C-11 PLANO, TX 75024				
EXAMINER				
LIU, LIN				
ART UNIT		PAPER NUMBER		
2145				
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

**Application No.**

10/725,714

**Applicant(s)**

HUNDSCHIEDT ET AL.

**Examiner**

LIN LIU

**Art Unit**

2145

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 12/10/2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-5, 8, 9 and 11-15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5, 8, 9 and 11-15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-8508)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

1. This office action is responsive to communications filed on 12/10/2007.

Claims 1-5, 8-9 and 11-15 are pending and have been examined.

***Continued Examination Under 37 CFR 1.114***

2. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 12/10/2007 has been entered.

***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1-5 recites the limitation "said network". There is insufficient antecedent basis for this limitation in the claim. For the purpose of examination, the examiner interprets this limitation as "Wide Area Network".

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148

USPQ 459 (1966), that are applied for establishing a background for determining

obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

7. Claims **1-4, 8-9, and 11-14** are rejected under 35 U.S.C. 103(a) as being

unpatentable over **Ishiguro (Publication no.: US 2003/0185397 A1)** in view of

**Graunke (PGPUB: US 2004/0032950 A1).**

With respect to **claims 1**, Ishiguro teaches a method and a system for determining locations of service instances for optimising distribution of a service in a network (Ishiguro: page 9, paragraph 155, network), the service instance providing the service from a source to a plurality of clients each having predetermined requirements, wherein said network can be modelled by means of a graph, said method comprises steps of:

placing (Ishiguro: page 7, paragraph 143, noted that each node on the tree is assigned with a licensing key in servicing for the encryption and decryption) a service instance in each leaf in said graph (Ishiguro: fig. 12, and page 7, paragraph 142, noted the hierarchical tree structure is made up with the leaves); and starting from the leaves, for each service instance (Ishiguro: page 8, paragraph 145, noted that the key granting

the use of any service starts from the leaf at the bottom level to the root node at the topmost level):

checking (Ishiguro: page 7, paragraph 129, noted that the client needs to provide leaf ID and password to the server in order to check whether the client has paid for the servicing fee) whether the service instance when placed in a vertex (Ishiguro: page 7, paragraph 143, noted that this checking is done in the node with the key provided) on the next higher level can fulfil the requirements (Ishiguro: page 8, paragraph 148, noted that after successively decrypting the node keys, the process is carried to next higher level node) of all clients to be served by said service instance; and

depending on the result of the checking step, moving said service instance one level higher (Ishiguro: page 8, paragraph 148 and page 13 paragraph 223, noted that after successively decrypting the node keys, the process is moved to next higher level node) to minimize a number of service instances necessary to provide the service to the clients.

However, Ishiguro does not explicitly teach a method of managing digital copyrights of content over a Wide Area Network (WAN).

In the same field of endeavor, Graunke teaches a method of managing digital content copyrights over a Wide Area Network (WAN) (Graunke; fig. 1, page 2, paragraph 19, noted that the encrypted content distribution can be effected through WAN).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to incorporate the method of managing digital copyrights of

content over a Wide Area Network (WAN) as taught by Graunke in Ishiguro's invention in order to provide a broader range of distribution area for the authorized user (Graunke: page 2, paragraph 19).

With respect to **claim 2**, Ishiguro teaches a method according to claim 1, further comprises the steps of determining that at least two service instances (Ishiguro: fig. 12, leaves 0, 1, 2 and 3) meet in said vertex (page 9, paragraph 155, noted that these leaves share the same vertex node K00) and combining said service instances into one service instance (Ishiguro: page 9, paragraph 155, noted that this shared node key is established as a content key in servicing for data encryption and decryption).

With respect to **claim 3**, Ishiguro teaches a method according to claim 1 further comprises a step, prior to said placing step, of determining levels in said graph (Ishiguro: page 10, paragraph 170, noted that the data has a tag part which indicates the positions of the encrypted node keys and leaf keys).

With respect to **claim 4**, Ishiguro teaches a method according to claim 1, wherein said checking step comprises a table-based analysis step (Ishiguro: fig. 15A, and page 9, paragraphs 157 and 159, noted that a table-based analysis is performed for the encryption keys).

With respect to **claim 8**, Ishiguro teaches a device for determining locations of service instances for optimising distribution of a service in a network (Ishiguro: page 9, paragraph 155, network), from a source to a plurality of clients each having predetermined requirements, wherein said network can be modelled by means of a graph, comprising:

lodging means (Ishiguro: page 7, paragraph 143, noted that each node on the tree is assigned with a licensing key in servicing for the encryption and decryption), for hosting a service instance;

checking means, for checking (Ishiguro: page 7, paragraph 129, noted that the client needs to provide leaf ID and password to the server in order to check whether the client has paid for the servicing fee) whether the service instance when placed in a vertex on the next higher level can fulfill the requirements (Ishiguro: page 8, paragraph 148, noted that after successively decrypting the node keys, the process is carried to next higher level node) of all clients to be served by said service instance;

processing means (Ishiguro: fig. 2 CPU 21), for coordinating said lodging means and said checking means and for controlling said vertex (Ishiguro: page 4, paragraph 79 and 87, noted that CPU carries out various of processes. Including the communication responses between the clients and the servers); and

means for moving the service instance (Ishiguro: page 8, paragraph 148 and page 13 paragraph 223, noted that after successively decrypting the node keys, the process is moved to next higher level node) to minimize a number of service instances necessary to provide the service to the client; and

input/output means (Ishiguro: fig. 2, I/O interface 32), for sending and receiving messages and service instances (Ishiguro: page 4, paragraphs 83, 84 and 87, noted that I/O interface handles the response from the user and transmits the encrypted content data to the storage).

However, Ishiguro does not explicitly teach a method of managing digital copyrights of content over a Wide Area Network (WAN).

In the same field of endeavor, Graunke teaches a method of managing digital content copyrights over a Wide Area Network (WAN) (Graunke; fig. 1, page 2, paragraph 19, noted that the encrypted content distribution can be effected through WAN).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to incorporate the method of managing digital copyrights of content over a Wide Area Network (WAN) as taught by Graunke in Ishiguro's invention in order to provide a broader range of distribution area for the authorized user (Graunke: page 2, paragraph 19).

With respect to **claim 9**, Ishiguro teaches a device according to claim 8, further comprises combining means, for determining that at least two service instances (Ishiguro: fig. 12, leaves 0, 1, 2 and 3) meet in said vertex (Ishiguro: page 9, paragraph 155, noted that these leaves share the same node K00) and for combining said service instances into one service instance (Ishiguro: page 9, paragraph 155, noted that this shared node key is established as a content key in servicing for data encryption and decryption).

With respect to **claim 11**, Ishiguro teaches a system for determining locations of service instances for optimizing distribution of a service in a network (Ishiguro: page 9, paragraph 155, network), the service instance providing the service from a source to a



plurality of clients each having predetermined requirements, wherein said network can be modelled by means of a graph, comprising:

means for placing a service instance in each leaf in said graph (Ishiguro: page 7, paragraph 143, noted that each node on the tree is assigned with a licensing key in servicing for the encryption and decryption);

means for starting with each leave (Ishiguro: page 8, paragraph 145, noted that the key granting the use of any service starts from the leaf at the bottom level to the root node at the topmost level) and determining whether said service instance, when place in a vertex on the next higher level, can fulfill the requirements of all clients to be served by said services instances (Ishiguro: page 8, paragraph 148, noted that after successively decrypting the node keys, the process is carried to next higher level node);

in response to an affirmative determination, means for moving said service instance one level higher (Ishiguro: page 8, paragraph 148 and page 13 paragraph 223, noted that after successively decrypting the node keys, the process is moved to next higher level node) to minimize a number of service instances necessary to provide the service to the clients.

depending on the result of the checking step (Ishiguro: page 8, paragraph 148 and page 13 paragraph 223, noted that after successively decrypting the node keys, the process is moved to next higher level node), moving said service instance one level higher to minimize a number of service instances necessary to provide the service to the clients.

However, Ishiguro does not explicitly teach a method of managing digital copyrights of content over a Wide Area Network (WAN).

In the same field of endeavor, Graunke teaches a method of managing digital content copyrights over a Wide Area Network (WAN) (Graunke; fig. 1, page 2, paragraph 19, noted that the encrypted content distribution can be effected through WAN).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to incorporate the method of managing digital copyrights of content over a Wide Area Network (WAN) as taught by Graunke in Ishiguro's invention in order to provide a broader range of distribution area for the authorized user (Graunke: page 2, paragraph 19).

With respect to **claim 12**, the limitations of this claim are substantially the same as those in claim 2. Therefore the same rationale for rejecting claim 2 is used to reject claim 12. By this rationale **claim 12** is rejected.

With respect to **claim 13**, the limitations of this claim are substantially the same as those in claim 3. Therefore the same rationale for rejecting claim 3 is used to reject claim 13. By this rationale **claim 13** is rejected.

With respect to **claim 14**, the limitations of this claim are substantially the same as those in claim 4. Therefore the same rationale for rejecting claim 4 is used to reject claim 14. By this rationale **claim 14** is rejected.

8. Claims **5 and 15** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Ishiguro (Publication no.: US 2003/0185397 A1)** in view of **Graunke (PGPUB: US 2004/0032950 A1)** and further in view of **Moody (publication no.: US 2005/0005272)**.

With respect to **claims 5 and 15**, the combined method of Ishiguro and Graunke teaches all the claimed limitations except that they do not explicitly teach a method of utilizing a Petri net analysis for a checking step.

In an analogous art, Moody teaches a method of utilizing a Petri net analysis for a checking step (Moody: page 3, paragraphs 47 and 48, noted that Petri nets technique is used in analyzing the system).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to incorporate the analysis technique of Petri nets as taught by Moody in the combined method of Ishiguro's and Graunke's method in order to provide a powerful and efficient system model that incorporate the synchronization, conflict, and concurrency issues associated with the distributed, dynamic resource allocation problem of autonomous negotiating systems (Moody: page 3, paragraph 48).

### ***Response to Arguments***

9. Applicant's arguments with respect to claims 1-5, 8-9 and 11-15 have been considered but are moot in view of the new ground(s) of rejection with reference.

### ***Conclusion***

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Evans et al. (PGPUB: US 2003/0194093 A1) discloses a secure transmission of digital content between a host and a peripheral by way of a digital rights management system.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lin Liu whose telephone number is (571) 270-1447. The examiner can normally be reached on Monday - Friday, 7:30am - 5:00pm, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Cardone can be reached on (571) 272-3933. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/L. L./  
/Lin Liu/  
Examiner, Art Unit 2145

/Jason D Cardone/  
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